

REMARKS

Applicants have received and carefully reviewed the Non-Final Office Action of January 26, 2010, in which claims 1-5, 8-11, 14-16, 19 and 20 are pending and stand rejected. With this paper, claims 1, 10, 14 and 15 have been amended. There is support for these amendments in the specification, claims, and drawings as originally filed, for example, on page 13, line 19 through page 14, line 4. No new matter has been added. Favorable consideration of the following remarks is respectfully requested.

Claim Objections

Claims 14 is objected to because it is unclear whether the reading of claim 14 as being a first tie layer is proper or whether it should read "second tie" layer. Claim 14 has been amended to read "second tie" layer. No new matter is added from this amendment.

Claim Rejections under 35 U.S.C. § 103

Claims 1-5, 8-11, 14-16, 19 and 20 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,549,552 ("Peters"), in view of U.S. Patent No. 5,478,620 ("Mügge"). Applicants respectfully traverse the rejection.

Claim 1 recites a tie layer comprising two layers of particular materials. Specifically, the elements are configured to appear in the following order: first tubular member / tie layer / balloon. More specifically, the layers of the tie layer are claimed so that they are configured to appear in the following order: first tubular member / polyamide layer / polyester layer / balloon.

The order of the materials, as recited in claim 1, is significant. From the specification: "In certain embodiments, both the first layer 34 and the second layer 36 may comprise tie layer materials. For example, the first tie layer 34, because of its positioning adjacent the balloon 14 material, may possess a greater bonding affinity to materials forming a distal balloon waist 32, whereas the second tie layer 36 may possess a greater bonding affinity to materials forming an inner tubular member 22 and may be adjacent the shaft 12 material. Although either the first 34 or the second 36 tie layer may possess a bonding affinity to both the distal balloon waist 32 and the inner tubular member 22, the layer distribution as described may provide the maximum bonding efficiency for the region as a whole." (page 13, line 19 – page 14, line 4 in original specification; paragraph 46 of published application)

One of ordinary skill in the art may draw two conclusions from this excerpted paragraph

in the present specification:

- (1) the chosen order of the materials may be significant, and
- (2) the materials used in the layers between the first tubular member and the balloon may be chosen based on bonding affinities with the first tubular member and with the balloon, respectively.

With regard to Peters, as noted by the Examiner in the Office Action, “Peters does not directly disclose the tie layer comprising a polyester polymer layer disposed on a polyamide layer, the polyamide layer disposed between the polyester layer and the first tubular member.” The elements of claim 1, as recited in claim 1, are not disclosed by Peters.

In addition, Applicant asserts that all the elements recited by claim 1 would not be taught or suggested to one of ordinary skill in the art by Peters alone. Peters is completely silent regarding bonding affinities, and does not teach or suggest, “wherein the polyamide layer possesses a greater bonding affinity for the first tubular than does the polyester layer; and wherein polyester layer possesses a greater bonding affinity for the balloon than does the polyamide layer” as recited by claim 1.

Mügge, taken in combination with Peters, also fails to teach or disclose all the elements of claim 1.

Mügge discloses a multilayer polyamide pipe, with inner and outer layers made entirely of polyamide, and “at least one intermediate layer made of a mixture of a linear crystalline polyester and a polyamide.” (column 1, lines 50-53) Mügge teaches only that the innermost and outermost layers are made from polyamide, and that alternating layers in the pipe are made from a mixture of polyamide and polyester. In other words, the only pipes disclosed by Mügge are formed as polyamide / mixture of polyamide and polyester / polyamide / ... / polyamide / mixture of polyamide and polyester / polyamide.

Mügge cannot remedy the deficiencies of Peters as a reference. Mügge teaches the selection of materials based on “a good barrier effect against the transported medium,” (column 1, lines 41-42), “good dimensional stability,” (column 1, lines 43-44), and “good mechanical load bearing capacity,” (column 1, lines 45-46) None of these criteria would teach or suggest that the chosen order of materials is important.

Indeed, Mügge is virtually silent regarding the ordering of materials used in the layers.

Mügge certainly does not teach or disclose anything to suggest that the materials used in the layers between the first tubular member and the balloon should be chosen based on bonding affinities with the first tubular member and with the balloon, respectively.

As a result, one of ordinary skill in the art would not modify any of the layered structures of Peters or Mügge to include “a tie layer disposed between the proximal waist length or distal waist length and the first tubular member, wherein the tie layer comprises a polyester polymer layer disposed on a polyamide polymer layer, the polyamide layer disposed between the polyester layer and the first tubular member,” as recited by claim 1.

For at least these reasons, Applicants submit that claim 1 is not obvious over the cited art.

Independent claims 10 and 15 each recite first and second tie layers, and “wherein the first tie layer possesses a greater bonding affinity for the first tubular than does the second tie layer; and wherein second tie layer possesses a greater bonding affinity for the balloon than does the first tie layer.” Similar to the discussion above, neither Peters or Mügge, taken alone or in combination, teach or suggest these elements. Applicants submit that these claims are allowable for at least these reasons as well. Similarly, claims 2-5, 8-9, 11, 14, 16, and 19-20, which depend from one of claims 1, 10 and 15, and add which significant limitations, are also believed to be in condition for allowance.

Conclusion

Reconsideration and further examination are respectfully requested. It is respectfully submitted that all pending claims are now in condition for allowance. Issuance of a Notice of Allowance in due course is requested. If a telephone conference might be of assistance, please contact the undersigned attorney at (612) 677-9050.

Respectfully submitted,

John Chen et al.

By their Attorney,

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/s. scot wickhem/
J. Scot Wickhem, Reg. No. 41,376
CROMPTON, SEAGER & TUFTE, LLC
1221 Nicollet Avenue, Suite 800
Minneapolis, MN 55403-2420
Tel: (612) 677-9050 Fax: (612) 359-9349